**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (CURRENTLY AMENDED) A wavelength allocation method of ~~signal light for use when~~ allocating signal lights ~~of two or more waves~~ on wavelength grids, where previously determined wavelength spacing in the wavelength grids is ~~made~~ a base unit, the allocated signal lights being used in wavelength division multiplexing optical transmission in which wavelength division multiplexed signal light obtained by multiplexing ~~a plurality of~~ signal lights of different wavelengths is transmitted over an optical transmission path, said method comprising:

setting ~~a consecutive allocation wavelength number~~ numbers representing how many ~~of~~ signal lights to be allocated consecutively in groups of consecutively allocated wavelengths on said wavelength grids~~, to different values according to wavelength bands, based on wavelength dependence of a generation amount of four-wave mixed light on said optical transmission path~~; and

consecutively allocating the signal lights on said wavelength grids in groups in accordance with the set ~~consecutive allocation wavelength number~~ numbers, wherein at least two groups have different numbers of signal lights, but not allocating ~~the~~ a signal light on at least one wavelength of said wavelength grid adjacent to each group of consecutively allocated wavelengths on the wavelength grids ~~on which signal lights are consecutively allocated~~.

2. (CURRENTLY AMENDED) A wavelength allocation method of signal light according to claim 1,

wherein ~~said consecutive allocation wavelength number is~~ the numbers representing how many signal lights to be allocated consecutively in groups are set to different values corresponding to ~~the~~ wavelength bands so that a four-wave mixing crosstalk amount calculated for each wavelength corresponding to said wavelength grids is equal to or less than a previously set tolerance value.

3. (CURRENTLY AMENDED) A wavelength allocation method of signal light

according to claim 2, further comprising:

setting a tolerance value $\alpha$ for the amount of four-wave mixing crosstalk;

calculating power in the optical transmission path for signal light of each wavelength corresponding to said wavelength grid;

obtaining a four-wave mixing crosstalk amount $\beta_i$ (i = wavelength number) corresponding to each wavelength for when the signal lights are allocated on all wavelengths corresponding to said wavelength grids, based on results of calculating the power in said optical transmission path, and also obtaining a four-wave mixing crosstalk amount $\Upsilon_{n\_1}$ corresponding to each wavelength for when the signal lights of n waves (where n is an integer of 2 or more) are allocated consecutively on said wavelength grid;

calculating a difference $C_n$ between said four-wave mixing crosstalk amounts $\beta_i$ and $\Upsilon_{n\_1}$ corresponding to the consecutive allocation wavelength number n;

obtaining the consecutive allocation wavelength number n(i) which satisfies a relationship $C_{n+1} < \beta_i - \alpha < C_n$ for the wavelengths where said four-wave mixing crosstalk amount $\beta_i$ exceeds said tolerance value $\alpha$; and

determining whether or not to allocate the signal light on each wavelength corresponding to said wavelength grid, in accordance with said ~~consecutive allocation wavelength number~~ numbers n(i).

4. (ORIGINAL) A wavelength allocation method of signal light according to claim 3,

wherein the power in said optical transmission path for said signal light of each wavelength is calculated based on input optical power to said optical transmission path and stimulated Raman scattering occurring in said optical transmission path.

5. (CURRENTLY AMENDED) A wavelength allocation method of signal light according to claim 1,

wherein when a plurality of upper level wavelength groups for collectively processing the signal lights of a plurality of wavelengths in an optical node on said optical transmission path, is provided for said wavelength grids,

for each signal band on which the signal lights are allocated in each of said upper level wavelength groups, the signal lights are allocated consecutively on the wavelength grids within said signal bands, in accordance with the ~~consecutive allocation wavelength number~~ numbers determined based on the wavelength dependence of said generation amount of four-wave

mixed light, but the signal light is not allocated on at least one wavelength grid adjacent to the wavelength grids on which said group of signal lights are allocated consecutively.

6. (ORIGINAL) A wavelength allocation method of signal light according to claim 5,

wherein said optical node is at least one of an optical add/drop multiplexing node and an optical compensation node.

7. (ORIGINAL) A wavelength allocation method of signal light according to claim 1,

wherein said wavelength grid is equally spaced.

8. (ORIGINAL) A wavelength allocation method of signal light according to claim 7,

wherein said equal spacing is 25GHz.

9. (CURRENTLY AMENDED) An optical transmission apparatus for transmitting wavelength division multiplexed signal light obtained by multiplexing a plurality of signal lights of different wavelengths transmitted over an optical transmission path, comprising:

a device which ~~consecutively~~ allocates signal lights on a wavelength grid ~~grids where~~ having a previously determined wavelength spacing ~~is made as~~ a base unit, ~~in accordance with the consecutive allocation wavelength number set to~~ different numbers being set in advance to represent how many signal lights are allocated consecutively in ~~values according to~~ wavelength bands of the wavelength grid, but does not allocate ~~the~~ any signal light on at least one wavelength grid adjacent to ~~the~~ any wavelength band ~~grids on~~ in which signal lights are consecutively allocated, and performing at least one of transmission and reception of wavelength division multiplexed signal light ~~applied with the wavelength allocation of~~ after allocating signal lights on the wavelength grid, wherein at least two wavelength bands have different numbers of consecutively allocated wavelengths of the wavelength grid to signal lights.

10. (PREVIOUSLY PRESENTED) A wavelength division multiplexing optical transmission system comprising:

an optical transmission apparatus according to claim 9,

wherein wavelength division multiplexed signal light is transmitted via an optical

transmission path.

11. (CURRENTLY AMENDED) A wavelength allocation method usable for transmitting a multiplexed optical signal, comprising:

allocating consecutive wavelengths of an equally spaced wavelength grid, to groups of signals, ~~including different~~ predetermined numbers representing how many consecutive wavelengths of the equally spaced wavelength grid are allocated to signals in each group, each group including at least three signals, and leaving at least one wavelength of the equally spaced wavelength grid unused between adjacent groups, and at least two groups having different predetermined numbers of signals, wherein all the groups of signals are multiplexed to be transmitted.